SYLLABUS
ELEC 569: ULTRAFAST OPTICAL PHENOMENA
SPRING SEMESTER
JANUARY 8 – APRIL 20, 2018

Credit Hours: 3

Time: 10:50–12:05 PM, Tuesdays and Thursdays

Place: 103 Brockman Hall

Instructor: *Junichiro Kono*, Professor, Departments of Electrical & Computer Engineering, Physics & Astronomy, and Materials Science & NanoEngineering, 351 Brockman Hall, kono@rice.edu.

Course Objective: This course is intended as an introduction to ultrafast phenomena for graduate students or advanced undergraduates, coversing the generation, propagation, and measurement of short laser pulses, of duration less than one picosecond. Concepts include mode locking, the effects of dispersion, optical pulse amplification, and time-domain nonlinear optical phenomena. A basic understanding of electromagnetic waves and of quantum mechanics is assumed.

Required Textbook: None.

Attendance: Lecture attendance is required. Attendance will be taken.

Assignments: Problem sets will be handed out occasionally. One of the important aspects of this class are the student presentations, which occur towards the end of the semester. This will be discussed during the first day of lecture. The student's grade will be determined by lecture attendance, satisfactory completion of problem sets, and the quality of the student presentations.

Grading: 10% – Attendance, 40% – Problem Sets, and 50% – Final Presentation

Rice Honor Code: In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-systemhandbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Disability Support Services: If you have a documented disability or other condition that may affect academic performance, you should: 1) make sure that this documentation is on file with Disability Support Services (111 Allen Center, adarice@rice.edu, x5841) to determine the accommodations you need; and 2) talk with the instructor to discuss your accommodation needs.

Syllabus Change Policy: This syllabus is only a guide for the course and is subject to change with advanced notice.